WHIRRAKEE

August 2014 Vol. 35 No. 7

Registered by Australia Post. Publication No. VBH4462

MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
Address for correspondence: PO Box 396, Bendigo 3552.
ISSN 0812-423X

Website: www.bendigofieldnaturalists.asn.au
E-mail address: info@bendigofieldnaturalists.asn.au

Office Bearers for 2013 - 2014

President	Richard Goonan	e-mail: richard.goonan@optusnet.com.au
Vice President	Bill Holsworth	5443 4063
Secretary/Public Officer	Matt Comer	0409 162 627
Minute Secretary (gen meet'gs)	Kerrie Norris *(still require a back up)*	5447 8017
Treasurer	Ben Goonan	
Excursion organiser	John Lindner	5448 3406
Syllabus organiser	Ben Goonan	
Librarian	Diana Collier & Maryann Hill	5443 0137
Garden Convenor/Secretary	Jan Orr	
Hall Management	Maurie Lewis (assisted by Rob Moors)	0407 427179
Whirrakee contact/editor	Sabine Wilkens e-mail: s.wilkens@latrobe.edu.au	5443 2797
Co-editor	Richard Goonan	
Whirrakee mailing coordinator	Gemma Candy	0423 634 416
Website coordinator/Webmaster	Ben Goonan	

Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $40; Family $50; Concession: Single $35; Family $40. *Whirrakee* subscription only is $40.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The meeting starts with members sharing their recent natural history observations. The invited speaker starts at 8:00pm and meetings conclude with supper. The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 5:30pm. Members of the Committee are the Office Bearer listed above and the following members: Anne Bridley, Kerrie Norris, John Lindner, Jenny Shield, Diana Collier, Devi Shanty

Excursions are conducted regularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. Several interclub field naturalist campouts are held every year.

The Bendigo Field Naturalists Club is actively involved in local conservation issues. An **indigenous garden** has been established around the Golden Square Senior Citizens Building. Working bees are advertised on the *Whirrakee* diary page.

Bird Observing: Club members conduct regular bird surveys. Please contact Anne Bridley 5442 6188 or Glenise Moors 5439 6254 for details. Special bird observations should be reported to Anne Bridley 5442 6188. To propose bird observing excursions please contact Kerrie Norris 5447 8017.

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club
Vol. 35, No. 7, August 2014
Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*), which is virtually endemic to the Bendigo region

CONTENT

Item	Contributor	Page
Short notices		3
June geology excursion report	John Lindner/Eric Wilkinson	3
Colour photo section	various contributors	4
Excursion program for reminder of 2014 (including August excursion)	John Lindner	10

Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles. Contributions should be posted or e-mailed to the editor at least two days prior to the last Wednesday of the month. They will be included as soon as possible after they are received, although space restrictions occasionally require shortening of articles or holding them over till the following edition of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's Note
What do you call an assembly of field naturalists? Is there a suitable collective noun? If not we ought to make one up. I was thinking (and laughing) about this, when reading John Lindner's excursion report. I feel very lucky to be in this club. However, September is close, and so is our AGM, and I am hoping you are giving serious thought to getting more involved in the club and give some of the regulars a bit of a break. We cannot afford to wear out 'our elder's as they have too much valuable knowledge!
Enjoy the first signs of spring out in the bush.

Front page photographer: Simon Smith

Here is a Silvereye trying to manage a Cherry Ballart fruit. The photograph was taken June 22 at Mt Terrick Terrick.
See more photos from this Sunday drive on page 6.

Short Notices

Observations in focus

Our general meetings now begin with sharing observations, but even if you cannot attend, you can always look at the Bendigo Field Naturalists Club project on the Bowerbird site and add any observations there. Observations can also be submitted through the BFNC website or hardcopy record sheet.
Bowerbird: http://www.bowerbird.org.au/
Our website: www.bendigofieldnaturalists.asn.au

Trails Working Group Initiative

To become involved please contact richard.goonan@optusnet.com.au for further information about upcoming meetings.

August Club Excursion

Please see page 10 for details about the next excursion and the program for the rest of the year.

Wildlife Health

Wildlife Health has asked for specimens of **naturally deceased** Lorikeets, Parrots, Rosellas, Cockatoos and Tuan/Phascogale (other animal specimens also considered) for research. They need chilled (NOT FROZEN) specimens to be collected and sent in special biological material packaging/containers. Ben Goonan will collect and send specimens in appropriate packaging. Contact Ben on 0403 664635. To collect a specimen you MUST WEAR GLOVES, or use a bag inside out and pull over the specimen. **Do not store in private/household refrigerators or touch specimens with bare hands.**

Taking the new Moss Book for a test run

John McCallum sent in a superb photo of a thallose liverwort, *Fossombronia* sp. (see page 6). He found it in the Notley's area in early July while taking the new moss book* for a "test run".
John wrote: 'I started in our yard in suburban Bendigo and found and identified *Grimmia pulvinata, Hypnum cupressiforme* and *Rosulabryum billarderi*. Since then, I have encountered and identified a few other common species including *Tortula muralis, Entothsodon subnudus var. gracilis, Triquitrella papillata* and a species of *Campylopus*. The little book is good and gives a beginner somewhere to start in identifying mosses in our area. You do need a good hand lens. David Meagher's and Bruce Fuhrer's book (A Field Guide to the Mosses and Allied Plants of Southern Australia) is a good companion volume.

**Mosses of the Dry Forests in South-Eastern Australia* by Cassia Read and Bernard Slattery

---

June Excursion Report by John Lindner

(edited by Eric Wilkinson)

For photos see pages 4 and 5

Summary

Date Sunday 15 June

Subject Geology of the Harcourt granite batholith and metamorphic contact zone

Leader Eric Wilkinson

Participants 18 people joined this field trip: Rod and Jan Orr, Nancy Tuohey, Ralph Moran, Elaine Matheson, Joy Clusker, Janet Justin, Simon Hay, Bev Culvenor, Alistair White, Matt Comer, Judy Milner, Joan Sullivan, Anne Bridley, David Shield, Vanessa Richardson, Kate Lindner and myself.

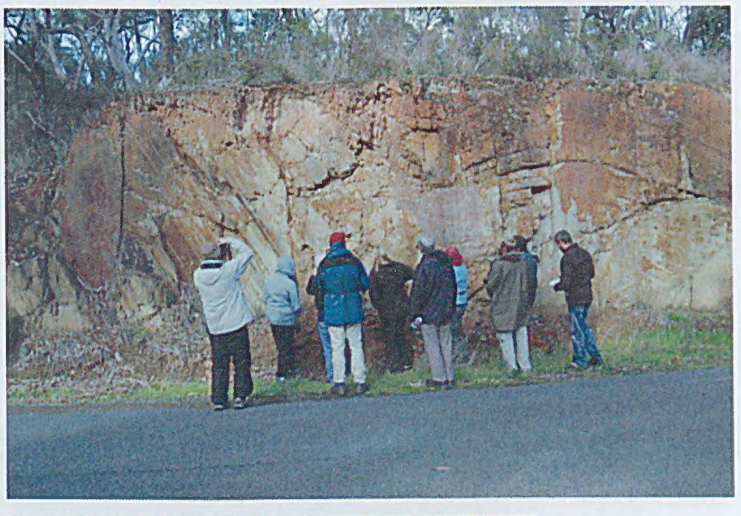
Transport We hired a bus to make it a lot easier to keep people together, and also allow Eric to use the intercom to comment on various features on the way. The club subsidized the cost to about 50%, so that people paid only a nominal fee. This kind of arrangement should perhaps be considered more in the future, as it has many advantages, despite needing quite a lot of organization. For example, many of the sites that we stopped to inspect would have been difficult, if not hazardous, if there had been half a dozen or more cars to park.

Information Eric produced an 8-page handout, with a map and diagrams to give the full picture of the geology we were looking at. This was extremely useful. The sites, Eric's commentary and the printed material combined to make a really informative and useful experience. *...continued on page 8*

Above: Dog Rocks, Mount Alexander: very large tors now free of their overburden, showing the joints which enabled their creation (Photographer: John Lindner).

Right: Eric Wilkinson (excursion leader) at Laytons Upper Quarry, wired for sound on a misty morning (Photographer: Joy Clusker)

June BFNC Geology excursion (for report, see page 3)



Below and right: Keeping off the road at Expedition Pass where anticline and syncline folds are clearly displayed in metamorphosed Ordovician sediments (photographer Joy Clusker).

BFNC Geology excursion, continued...
(Photographer: John Lindner)

Right: Fogarty's Gap: large pegmatite dyke cutting along between the bedding planes of the metamorphosed Ordovician strata.

Below: Base of Mount Tarrengower: the contact zone, indicated by the stick, between the metamorphic hornfels (left) and the Baringhup granodiorite (right). Both look rather similar in colour and texture, even in the field, but a glance at the ground on each side will indicate their origins.

Left: Layton's quarry, Mount Alexander: development of blocks of granite beneath the ground surface, due to the jointing system.

A Sunday Drive on 22nd June
(Photographer: Simon Smith)
Above: A Brown Falcon - the idea is to drive south along the Bendigo-Tennyson Road in the afternoon sun. We found about 4 Brown Falcons on fence posts - as soon as you get out of a car they fly away, so you creep closer in the car (clicking away madly) while they stare at you suspiciously.

Right: Here is the Silvereye from the front cover again, only slightly further with its big meal (Mt Terrick Terrick)

Below: *Fossombronia* sp., a thallose liverwort, found near Notley's in early July (Photographer: John McCallum)

Satinash *Syzigium* sp. The vertical slits are entrances for ants that live in the hollows and defend the plant. I have a feeling that a fungus is also involved in this web of interactions…Marvellous!

Fig tree trunk with fruit. Flowering and fruiting from the trunk is advantageous in places where there is a lot of through-traffic of low-flying or climbing animals . or of dispersers that pick up fallen fruit from the forest floor.
(The correct term is cauliflory)

Plant-Animal Interactions in the Daintree (Photographer: Sabine Wilkens who was lucky enough to escape the Victorian winter for a few days

Below: a botanical artist, this caterpillar (?) has cut a leaf, turned it over and decorated it beautifully (or are the holes for ventilation?)

Above: The caterpillar from the four-a-clock moth, w stripes (similar to the caterpillar)

June Excursion Report continued from page 3

Stops Mount Alexander

1. An abandoned granite quarry (former Layton's Upper Quarry): nature and composition of Harcourt Granodiorite, large aplite dyke, extraction of granite for monumental masonry, huge wastage of unwanted rock.
2. Dog Rocks: widely spaced jointing system in granite which leads to exposure of very large tors, exfoliation or peeling of thin slabs on exposed surfaces, "the dog" on the big tor.
3. Expedition Pass Metamorphic aureole: a shallow anticline and syncline in the sediments, variation in hardness from hornfels ("hard rock") to some softer material, deposits of iron oxide on joint planes within the sediments.
4. Castlemaine Anticline in Lyttleton Street: a very symmetrical concentric fold in sandstone, the fold dips or plunges to the south.
5. Fogarty's Gap Metamorphic aureole: pegmatite dykes intruded across the strata (pegmatite has a similar composition to the granite from which it has been derived, but has much larger crystals of quartz, feldspar and mica), pale coloured lenticular bodies which resulted from hot solutions from the granite invading the sediments, dendrites (taking the shape of a tree) of black manganese oxide crystallised on joint planes.
6. Mount Tarrengower Views from the summit: notably the Big Hill Range and Mount Alexander, the various volcanoes towards Daylesford and Ballarat (notably Mount Franklin), granite hills projecting from the northern plain (Mounts Korong and Kooyoora).
7. Lower slope of Mount Tarrengower Granodiorite-hornfels contact: it is possible to stand with a foot on each type of rock.
8. Mount Tarrengower Road Metamorphic aureole: sharply folded anticline and syncline, very weathered surface with a lot of iron oxide evident.
9. Maldon - Cairn Curran Rd Baringhup Granodiorite: comparison to the Harcourt Granodiorite (smaller grains, closer spaced joints, smaller tors, smaller xenoliths).
10. Cairn Curran Reservoir Baringhup Granodiorite on the shore of the lake: exposed rock as pavements, some very decomposed rock at the surface, sandy beaches derived from quartz weathered out of the rock

Weather Pretty cold and windy, but no rain, which could have made it all too hard. Just as well it wasn't like Monday 16.

FURTHER DETAILS

Well, you go and get a group of field naturalists together, and you have only yourself to blame. The theme is geology, specifically granite intrusion and the associated metamorphism (contact type due to heat) of the surrounding Ordovician sediments. Do they want to discuss geology and rocks? Well maybe and sometimes. But what about those trees and shrubs . . . and those fungi . . . and those birds . . . and those volcanoes . . . ? Don't worry if we just hold everybody up in a wind tunnel and freeze to death. Can we just get back to the granite and the metamorphics please? As I have said before "It's like herding cats . . .".

The Harcourt Batholith and the associated metamorphic aureole (ring) which we call the Big Hill Range is by far the pre-eminent large-scale landscape feature near Bendigo. The flat lands to the north have many interesting features but none on such a scale. From a field naturalist point of view, it is useful to understand the importance of this geological feature in determining the shape of the landscape and the vegetation which covers it. The various habitats that develop then host the fauna we know so well. Elevated topography results in areas, which are exposed to various degrees of sun, rain and wind. It also of course greatly influences the drainage system. The rocks with their varying mineral compositions weather and decompose to finer material which varies in acidity (pH), nutrient levels, drainage and water-holding ability, penetrability by roots, and many other factors. The underlying rocks and how they weather determine to a large extent the landscape we utilize, live on and admire.

The features about granite that we learned about were as follows:

•Minerals of which it is comprised - quartz, feldspar (orthoclase and plagioclase) and biotite (black mica), and sometimes additional minerals such as hornblende.

•The jointing system which developed within the granite as it cooled, basically a series of planes at right angles, one horizontal and two vertical.

•The development of corestones beneath the ground surface as a result of those intersecting planes. The corners and edges are the first parts to be rounded.

•The subsequent development of free-standing tors as the overburden is removed by erosion.

•Tors gradually lose material from the outside by onion peeling or exfoliation.

•The methods such as the use of 'plug and feather' by which quarrying frees blocks of stone from the mass utilising the joints in the rock.

•It may contain dykes made of aplite and pegmatite and darker inclusions (xenoliths).

The features about metamorphosed Ordovician sediments that we learned about were these:

•The degree of hardness is greater the closer the rock was to the molten mass.

•Brown staining comes from iron oxide deposition derived from the breakdown of iron bearing sulphide minerals such as pyrites (iron sulphide).

•They have been intruded by dykes of pegmatite, especially close to the granite contact, and pale-coloured masses of softer material. Both of these are derived from hot liquid materials derived from the molten granite.

•Folding occurs when the rocks are still plastic to a degree due to water still being present. When all the water has been expelled they are too brittle to fold.

THE PROMISED TEST

Right, let's get serious. All those who attended are required to answer the following test questions, to see if you were paying attention. The answers will be in the next edition, so you can't cheat. And remember the Big Brother of Geology, who knows about every grain of quartz being shed from every weathering rock everywhere, is watching you. So if you were paying too much attention to those revolting, slimy fungi and those trivial Pied Currawongs in Castlemaine, tough!

1. What is the difference between granite and granodiorite in their mineral composition?
2. In what 4 ways does the Baringhup Granodiorite differ from the Harcourt Granodiorite?
3. There were dendrites of manganese oxide deposited between the joint planes of the metamorphic aureole at Fogarty's Gap. How did they get this name?
4. Why are metamorphosed Ordovician hillsides smoother in outline than granite hillsides?
5. What makes xenoliths ("foreign rocks") in granite darker in colour than what surrounds them?
6. In granite masses, how many jointing planes are there, and what orientations are they?
7. Why do geologists refer to "granite" when they should be more precise and say "granodiorite"?
   - A There's no difference anyway
   - B They are after all, just ordinary people like us, so like to keep it simple
   - C They don't like to be too exhibitionistic when it comes to technical terms
8. What is aplite?
   - A An app about rocks which tries very hard to reduce all the hideous technical jargon of geology to bland pap
   - B A pale coloured dyke rock consisting of fine grained quartz and feldspar
   - C A horrible blot on a fine piece of monumental stone
9. Why are the Dog Rocks at Mount Alexander named so?
   - A Someone was having a dog of a day
   - B There were once wild dogs who lurked in the caves
   - C There's a rock on the biggest tor which looks like a dog, only it's really a seal
10. What is the name of the closest volcano southwards of Mount Tarrengower?

BENDIGO FIELD NATURALISTS CLUB – EXCURSIONS - SECOND HALF OF 2014
(Please note that most excursions are in the week following the monthly meeting)

Friday 15 August Excursion

Subject **Waterbird observations and count**
Leader Jane Cleary
Location Coliban Water sewerage treatment works, Epsom
Duration Half day
Notification Please let Jane know at the July or August general meetings, that you will be coming
Meeting Place/Time 9.00 am at the sewerage treatment plant, Howard Street, Epsom. From the main entrance, proceed to the end of the road to the visitor parking area
Induction Coliban Water now requires that all participants must undergo a short induction session before being admitted to the ponds. This is the main reason why, at the moment, we cannot run the activity on a weekend. 5 people did this session on 28/2/14. We will have to book new people in for this session. Once you have done it, you don't have to do it again

Please bring Binoculars and telescope if you have one. Warm clothes and raingear, since the site is a bit exposed to the wind. Morning tea refreshments.

Background A small group of people have been doing these counts twice a year for some time. We have been lucky enough to have seen some wonderful things: many busy little Blue-billed Ducks, the strange behavior of the male Musk Duck and even some interesting antics by Buff-banded Landrails. But all the waterbirds are interesting and beautiful in their own ways. And we do actually look at all the bush birds and birds of prey as well. So there is plenty to see.

Walking distance We usually start off by observing a little swamp in the bend of Wallenjoe Road, called Crake's Dam: if the water level is low, you can sometimes get a good look at Spotted Crakes. The full walk encompasses one side of Lagoon 6 with the 2 islands and around May Swamp, returning to the cars via Wallenjoe Road. Total distance = 3.5 km, but it's done quite slowly with a lot of stops.

Sunday 14 September

Theme	**Botany (Spring wildflowers) and birds**		
Possible locations	Wildflower Drive, Strathfieldsaye, Sedgwick Water Channel and adjoining Big Hill Range, One Tree Hill, Whipstick-Kamarooka (SEANA 2012 format, SF), Wellsford Forest (SF), South-east forests (SF), Southern Whipstick (SF)		
Duration	Whole day	Leader(s)	To be appointed

Sunday 12 October

Theme	**Botany (Spring wildflowers) and birds**		
Location	One of the excursions listed under September		
Duration	Whole day	Leader(s)	To be appointed

Weekend 1/2 November with Monday 3 and Tuesday 4 (Melbourne Cup Day)

Theme	**Campout**		
Location	Warby-Ovens National Park, Killawarra Forest (northern) section Camping at The Forest Camp (toilets, shelter, fireplaces, camping spots) Could also visit Warby Range (southern) section and Honeyeater Dam, Chiltern-Mount Pilot National Park		
Duration	See dates above	Leader(s)	To be appointed

Diary

All Club meetings are held at the Golden Square Senior Citizens Building, Old High St Golden Square, unless otherwise indicated.

Wednesday August 13 **7.30pm**
Mr. Reiner Richter, The Entomological Society of Victoria will talk about 'Photographing and identifying Dragonflies of western and central Victoria'

Excursions for August
Friday 15 August
Waterbird count Coliban Water sewerage treatment works, Epsom. See p 10 for details.

Family Nature Club
The Nature Club activities will continue in 2014, please listen out for announcements or check out their website.
Registration:
Bendigonatureclub@gmail.com or 5443-1326
http://bendigofamilynatureclub.blogspot.com/

Bendigo Native Plant Group meeting.
All interested people are welcome to come along. Meeting starts at 7:30pm on the third Tuesday of the month, Golden Square Senior Citizens Hall. Next meeting: 19th of August

Advance notice: 10th Biennial FJC Rogers Seminar – *Brachychiton* and Allied Genera
Saturday and Sunday 18th and 19th October

Wildlife Rescue & Information Network Inc.
W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals. It is fully endorsed by the Dept of Sustainability and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433.

WRIN meetings held on the 1st Saturday of the month at 1pm the Golden Square Senior Citizens Hall. Everyone is welcome to these.

SEANA spring camp 2014 Portland Field Naturalists Club

Portland Field Naturalists Club members are pleased to invite fellow naturalists to the SEANA Spring campout to be held in Portland on the **26th-29th September 2014.**
Program Highlights include;
Botany, Magnificent coastal scenery, Aboriginal heritage, Birdwatching, Glenelg River cruise, Seals tour, Harbour Cruise, Rock-pooling, Enchanted forest walk, Cape Nelson- Point Danger seabird watching and nature walk.
They have a particular emphasis on catering for children, with the camp occurring in the school Holidays, and have scheduled Junior activities and reduced child rates.
Full Payment must be received by August 31st 2014
Camp coordinator: Ruth Graney Ph: 55295335, Email: irgraney@bigpond.com
Matt Comer will have the full information at the August General meetings for viewing.

17th Box-Ironbark Ecology Course
Monday – Friday, 6th-10th October
Nagambie Lakes
Five absorbing days of field studies in the heart of Box-Ironbark country hosted by the Euroa Arboretum for those interested in gaining a general understanding of ecological processes and principles.
For more details, see July *Whirrakee* page 11
The five day residential course is based at Nagambie Lakes Leisure Resort with en suite facilities. Catering is inclusive of all meals.
Course Fee: $1600 (plus GST) includes accommodation, meals, transport, instruction, and course notes. For more information: Kate Stothers katelance1@gmail.com or phone 0458 680 990

17th Annual Hindmarsh Landcare Tree Planting, Saturday & Sunday 16 & 17August
Rainbow. Detail and how to register will be posted on the website below soon, or contact Steve Hemphill on 0429 006 936
http://www.hindmarshlandcare.org.au/